MOISTURE- AND MOLD-RESISTANT
HIGH-PERFORMANCE SOLUTIONS
Product Overview

DensGlass® Sheathing has fiberglass mats for superior mold and moisture resistance compared to paper-faced sheathings.

- Fiberglass mats eliminate a potential food source for mold and may reduce remediation and scheduling delays associated with paper-faced drywall.
- Replaces traditional paper-faced sheathing.
- Backed with a 12-month limited warranty against in-place weather exposure damage (delamination, deterioration and decay).*

*For complete warranty details, visit www.gpgypsum.com

When tested, as manufactured, in accordance with ASTM D 3273, DensGlass Sheathing scored a 10, the highest level of performance for mold resistance under the ASTM D 3273 test method.

The score of 10, in the ASTM D 3273 test, indicates no mold growth in a 4-week controlled laboratory test. The mold resistance of any building product when used in actual job site conditions may not produce the same results as were achieved in the controlled, laboratory setting. No material can be considered mold proof. When properly used with good design, handling and construction practices, Dens™ Brand gypsum products provide increased mold resistance compared to standard paper-faced wallboard.

Available Sizes/Dimensions

DensGlass Sheathing is available in 1/2” (12.7 mm) thickness and DensGlass® Fireguard® Sheathing is available in 5/8” (15.9 mm) thickness. DensGlass Sheathing is manufactured in a 4’ (1219 mm) width and 8’ (2438 mm), 9’ (2743 mm) and 10’ (3048 mm) lengths. Other lengths are available upon request.
DensGlass® Sheathing

DensGlass® Sheathing is the preferred substrate under brick, stone, stucco, siding and Exterior Insulation and Finishing Systems (EIFS) because of its exemplary track record. DensGlass Sheathing should be specified for any project where flexibility and easy sheathing installation are paramount without the headaches and expense of delamination, deterioration, sagging and warping. Look for the distinctive GOLD color to ensure you're using genuine DensGlass Sheathing.

Mold Resistance
Independent tests confirm that DensGlass Sheathing, with its patented fiberglass mat design, resists the growth of mold when tested, as manufactured, per ASTM D 3273.

Strength
Fiberglass mats penetrate into the panel to make an integrated unit that offers superb strength; outstanding resistance to delamination, deterioration, warping and job site damage; and an excellent bonding surface for EIFS. The flexural strength of DensGlass Sheathing is approximately the same in both directions. This means DensGlass Sheathing can be installed either vertically or horizontally without sacrificing wall strength between studs. DensGlass panels also protect and help stabilize structural framing.

Stability
DensGlass Sheathing is extremely resistant to rippling, buckling and sagging, even under humid conditions — which makes it particularly suitable for soffits. In actual tests, DensGlass panels exceeded ASTM C 1396 and ASTM C 79 standards for humidified deflection by a factor of five times over the standard for paper-faced gypsum sheathing.

Fire Resistance
DensGlass Sheathing is noncombustible as described and tested in accordance with ASTM E 136. Tests of 5/8” (15.9 mm) DensGlass® Fireguard® Sheathing conducted in accordance with ASTM E 119/CAN ULC S-101 qualify the product for a variety of UL listings and other designs in the GA-600 Fire Resistance Design Manual.

Superior Weather Protection
DensGlass Sheathing integrates a water-resistant, treated core with a fiberglass mat face and back to provide superb protection from the elements. Panels will not delaminate or deteriorate due to normal weather conditions — even during construction delays that last as long as 12 months after installation.

A water-resistive barrier is not required over DensGlass Sheathing to provide for the protection of the gypsum sheathing itself. Consult with the local building code, design professional, owner or cladding manufacturer for water-resistive barrier requirements. DensGlass Sheathing is the ideal substrate for a wide variety of air and water-resistive barriers including building wraps, liquid applied coatings and self-adhering membranes. See page 9 for details.

Easy to Handle
DensGlass Sheathing is lightweight and easy to handle. It can be cut and fastened with standard drywall tools and fasteners. The product is much easier to work with than wood substrate, cement board or fiber cement sheathing, which tend to be heavy and bulky.

Outstanding Warranty
DensGlass Sheathing is covered by a 12-month limited warranty for weather exposure, a five-year limited warranty against manufacturing defects and a 12-year limited warranty when used as a substrate for architecturally specified EIFS. For a copy of the limited warranty, call 1-800-225-6119. Or visit our Web site at www.gpgypsum.com.

Standards and Code Compliance
DensGlass Sheathing is manufactured to meet ASTM C 1177. Application standards where applicable are in accordance with Gypsum Association Publication GA-253 for gypsum sheathing or ASTM C 1280.

Evaluated by:
• ICC-ES Legacy Report NER 574
• CCMC-12064-R
• ICC-ES Legacy Report ER 4305
• N.Y. City MEA 244-B8-M
• Florida Product Approval Code FL 2524-R3

The data relating to fire- and sound-tested assemblies is based on the characteristics, properties and performance of materials and systems obtained under controlled test conditions as set forth under the appropriate ASTM standard, such as E 119 (fire), E 90 (sound) or E 72 (structural).

Georgia-Pacific Gypsum Products and LEED®
Many of our products may contribute to LEED® credits. To find out more, please reference the Sustainable Materials Data Sheets (SMDS) on our website (www.gpgypsum.com) for recycled content, regional materials, low emitting materials and other potential categories for LEED credit contributions.
### Physical Properties

<table>
<thead>
<tr>
<th>Product Comparison</th>
<th>5/8&quot; (15.9 mm) DensGlass® Fireguard®</th>
<th>5/8&quot; (15.9 mm) Gypsum Sheathing, Type X (Paper-faced)</th>
<th>1/2&quot; (12.7 mm) DensGlass Sheathing</th>
<th>1/2&quot; (12.7 mm) Regular Gypsum Sheathing (Paper-faced)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Width, Nominal</strong></td>
<td>4' (1219 mm)</td>
<td>4' (1219 mm)</td>
<td>4' (1219 mm)</td>
<td>4' (1219 mm)</td>
</tr>
<tr>
<td><strong>Length, Standard</strong></td>
<td>8', 9', 10' (2438, 2743, 3048 mm) ± 1/4&quot; (6 mm)</td>
<td>8', 9', 10' (2438, 2743, 3048 mm) ± 1/4&quot; (6 mm)</td>
<td>8', 9', 10' (2438, 2743, 3048 mm) ± 1/4&quot; (6 mm)</td>
<td>8', 9', 10' (2438, 2743, 3048 mm) ± 1/4&quot; (6 mm)</td>
</tr>
<tr>
<td><strong>Weight/lbs/SF (kg/m²)</strong></td>
<td>2.5 (12)</td>
<td>2.2 (11)</td>
<td>1.9 (9)</td>
<td>1.9 (9)</td>
</tr>
<tr>
<td><strong>Bending Radius</strong></td>
<td>8' (2438 mm)²</td>
<td>n/a</td>
<td>6' (1829 mm)²</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>Composition</strong></td>
<td>Fiberglass mats gypsum core</td>
<td>Paper facings gypsum core</td>
<td>Fiberglass mats gypsum core</td>
<td>Paper facings gypsum core</td>
</tr>
<tr>
<td><strong>Racking Strength, lbs./ft. (N/m) (Ultimate – not design value)</strong></td>
<td>&gt;654° (&gt;9544)</td>
<td>654° (9544)</td>
<td>&gt;540° (&gt;7878)</td>
<td>540° (7878)</td>
</tr>
<tr>
<td><strong>Flexural Strength,° parallel, lbf. (N) (4' weak direction)</strong></td>
<td>100° (445)</td>
<td>50° (222)</td>
<td>80° (356)</td>
<td>40° (178)</td>
</tr>
<tr>
<td><strong>Compressive Strength</strong></td>
<td>min. 500 psi (3445 kPa)</td>
<td>min. 400 psi (2750 kPa)</td>
<td>min. 500 psi (3445 kPa)</td>
<td>min. 350 psi (2400 kPa)</td>
</tr>
<tr>
<td><strong>Humidified Deflection,° inches</strong></td>
<td>1/8° (3 mm)</td>
<td>5/8° (15.9 mm)</td>
<td>2/8° (6 mm)</td>
<td>10/8° (32 mm)</td>
</tr>
<tr>
<td><strong>Permeance ( perms) [ng/Pa•s•m²]</strong></td>
<td>17 [970]</td>
<td>25 [1400]</td>
<td>23 [1300]</td>
<td>27 [1600]</td>
</tr>
<tr>
<td><strong>“R” Value °F•ft•hr/ BTU (K•m²/w)</strong></td>
<td>.67 (0.118)</td>
<td>.56 (0.099)</td>
<td>.56 (0.099)</td>
<td>.45 (0.079)</td>
</tr>
<tr>
<td><strong>Combustibility</strong></td>
<td>Noncombustible</td>
<td>Combustible</td>
<td>Noncombustible</td>
<td>Combustible</td>
</tr>
<tr>
<td><strong>Linear Expansion with Change Moisture in/in/%RH(mm/mm %RH)</strong></td>
<td>6.25 x 10°</td>
<td>7.5 x 10°</td>
<td>6.25 x 10°</td>
<td>7.5 x 10°</td>
</tr>
<tr>
<td><strong>Flame Spread, E84 CAN ULC-S102</strong></td>
<td>10</td>
<td>15</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td><strong>Coefficient of Thermal Expansion in/in/°F (mm/mm/°C)</strong></td>
<td>8.5 x 10°</td>
<td>10 x 10°</td>
<td>8.5 x 10°</td>
<td>10 x 10°</td>
</tr>
<tr>
<td><strong>Resists Growth of Mold (tested, as manufactured, per ASTM D 3273)</strong></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>Handling Characteristic</strong></td>
<td>Scores with utility knife and snaps easily</td>
<td>Scores with utility knife and snaps easily</td>
<td>Scores with utility knife and snaps easily</td>
<td>Scores with utility knife and snaps easily</td>
</tr>
<tr>
<td><strong>Fasteners</strong></td>
<td>Standard</td>
<td>Standard</td>
<td>Standard</td>
<td>Standard</td>
</tr>
</tbody>
</table>

1. Gypsum Association – GA-253  
2. Minimum requirements for ASTM C 1396  
3. Maximum requirements for ASTM C 1396  
4. Tested in accordance with ASTM C 473  
5. Tested in accordance with ASTM E 96 (dry cup method)  
6. Tested in accordance with ASTM C 518 (heat flow meter)  
7. Minimum requirements for ASTM C 1177  
8. Double fasteners on ends as needed  
9. Tested in accordance with ASTM E 72  
10. As defined and tested in accordance with ASTM E 136
**Installation Recommendations**

- DensGlass® Sheathing must be installed in accordance with the instructions in this brochure, Gypsum Association document GA-253 or ASTM C 1280. DensGlass Sheathing can be attached parallel or perpendicular to wood or metal framing. Use appropriate board orientation for specific fire assemblies and shear wall applications within this document, other reference documents or as required by designing authority. The framing width shall not be less than 1 1/2" (38 mm) wide for wood framing and 1 1/4" (32 mm) for steel framing. Framing members shall not vary more than 1/8" (3 mm) from the plane of the faces of adjacent framing.

- Fasteners should be driven flush with the panel surface (not countersunk) and into the framing system. Locate fasteners at least 3/8" (9 mm) from the ends and edges of the sheathing. Nails or screws, as listed in the fastener chart, may be used to attach DensGlass Sheathing to framing. When a pneumatic fastening system into metal is specified to attach DensGlass Sheathing, consult with manufacturer for application specifications and shear resistance data. DensGlass Sheathing is not to be used as a base for nailing or other fastening.

- Install DensGlass Sheathing with end joints staggered on horizontal applications. Ends and edges of the sheathing should fit tightly. DensGlass Sheathing panels shall not be less than 8" (203 mm) from the finish grade in fully weather- and water-protected siding systems, and not less than 12" (305 mm) from the ground for properly drained and ventilated crawl spaces. Consult with the design authority for control joint recommendations.

**Wall Applications**

**Installing Cladding over DensGlass Exterior Sheathing**

Most conventional exterior sidings and wall coverings — including wood, vinyl, composition, metal, stone, brick, wood shingles, shakes and plywood panels — may be applied over DensGlass Sheathing. Consult your local building codes for water resistive barriers (WRB) requirements.

- DensGlass Sheathing
- Insulation
- Framing
- Water-Resistant Barrier
- Masonry Tie
- 2" (50mm) Max. Air Space
- Brick Masonry or Stone Veneer
- Flashing and Weeps
- Wood Shingles or Shakes
- Plywood Siding
- Vinyl Siding
- Fiber Cement Siding
- Metal Siding

**Brick Cavity Wall**

Masonry or stone veneer can be applied over DensGlass Sheathing just as it would be over any other type of sheathing. Attach the masonry ties securely through the panels and into the steel or wood framing. Space the ties as required by masonry courses. Apply water-resistive barrier as required by building code or design authority.

**Shingles, Shakes, Vinyl, Metal, Wood, Fiber Cement Siding**

DensGlass Sheathing can be used in applications such as under wood shakes or shingles, plywood panel siding or other horizontal siding applications. All siding must be attached through the DensGlass Sheathing and into the steel or wood framing. Apply water-resistive barrier as required by building code or design authority.

*Illustrations not intended for design or specification purposes.*
Wall Applications continued

A. DensGlass® Sheathing
B. Insulation
C. Framing
D. Paper-Backed Metal Lath
E. Conventional Stucco
F. Minimum 1/4” (6 mm) Gap

Conventional Stucco
Stucco systems may be applied over DensGlass Sheathing using paper-backed metal lath. Paper-backed metal lath must be mechanically attached through the DensGlass Sheathing into the steel or wood framing. Install stucco system in accordance with the manufacturer’s instructions, the Portland Cement Association guidelines and local building code requirements.

Exterior Insulation and Finish Systems (EIFS)
DensGlass Sheathing is an ideal substrate for adhesive or mechanical application of expanded polystyrene (EPS) or extruded polystyrene insulation in EIFS applications and is recommended for all climate zones.

DensGlass Sheathing is designated as the preferred gypsum substrate for EIFS by EIMA, the EIFS industry members association, in the EIFS Durability Specifications Guideline. DensGlass panels are treated with an exclusive GOLD color primer coating. This coating, proprietary to Georgia-Pacific Gypsum and developed especially for DensGlass Sheathing, has several important advantages for EIFS applications:

• Eliminates the need for sealer/primer with adhesively applied EIFS.
• Strengthens the bond between panel and surfacing product.
• Makes the panel more resistant to surface water. The result: labor cost and callbacks go down while customer satisfaction on each project goes up.
• 12-year limited warranty when used in an architecturally specified EIFS application.
• Maximum framing spacing 16” (406 mm) o.c. for 1/2” (12.7 mm) and 24” (610 mm) o.c. for 5/8” (15.9 mm) DensGlass® Fireguard® Sheathing.

A. DensGlass Sheathing
B. Adhesive or Mechanically Attached
C. Polystyrene Insulation
D. Reinforcing Mesh Embedded in Base Coat
E. Finish Coat

High Velocity Hurricane Zone (HVHZ)
The ability to withstand the destructive winds and the impact of various objects during a hurricane in a coastal area is key to the survival of any exterior cladding system. DensGlass Sheathing from Georgia-Pacific Gypsum helps BASF, Sto Corp, Dryvit, Parex Lahabra, Inc., Fiberweb, Inc. and Wellbilt International’s systems pass the strict Miami-Dade County and Florida Building Code requirements for High Velocity Hurricane Zones (HVHZ). The systems were tested independently to determine the performance against specific criteria for impact resistance, air and water infiltration resistance and wind load resistance. For more information, please visit www.gpgypsum.com or contact the system manufacturer.
DensGlass® Sheathing

Fastening and Framing

<table>
<thead>
<tr>
<th>Thickness (in mm)</th>
<th>Framing Spacing (in mm)</th>
<th>Panel Orientation</th>
<th>Fastener Spacing – Wood Framing</th>
<th>Fastener Spacing – Metal Framing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2” (12.7)</td>
<td>24” (610) o.c. max²</td>
<td>Parallel or Perpendicular</td>
<td>8” (203) o.c. field &amp; perimeter</td>
<td>8” (203) o.c. along framing</td>
</tr>
<tr>
<td>5/8” (15.9)</td>
<td>24” (610) o.c. max²</td>
<td>Parallel or Perpendicular</td>
<td>8” (203) o.c. field &amp; perimeter</td>
<td>8” (203) o.c. along framing</td>
</tr>
</tbody>
</table>

1. Only for mechanically attached claddings. When specified behind EIFS, maximum framing spacing for 1/2” (12.7 mm) DensGlass® Sheathing is 16” (406 mm) o.c.
2. Fastener spacing around the perimeter of the wall and along intermediate vertical framing members. To meet the racking shear strength listed in the physical properties table, fastener spacing is 4” (102 mm) o.c. around the perimeter of each panel and 8” (203 mm) o.c. along vertical framing members.
3. For racking strength resistance apply panel edges parallel with framing spaced a maximum of 16” (406 mm) o.c. for both 1/2” (12.7 mm) and 5/8” (15.9 mm) DensGlass Sheathing.
4. Fire-rated assemblies may require additional fasteners, see specific assembly details.

<table>
<thead>
<tr>
<th>Thickness (in mm)</th>
<th>Framing Spacing (in mm)</th>
<th>Panel Orientation</th>
<th>Fastener Spacing – Wood Framing</th>
<th>Fastener Spacing – Metal Framing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2” (12.7)</td>
<td>16 (406)</td>
<td>Vertical</td>
<td>65 (3.11)</td>
<td>70 (3.35)</td>
</tr>
<tr>
<td>5/8” (15.9)</td>
<td>24 (610)</td>
<td>Vertical</td>
<td>68 (3.26)</td>
<td>85 (4.07)</td>
</tr>
</tbody>
</table>

Negative Uniform Lateral Loads (Wind Load)

5/8” (15.9 mm) DensGlass® Fireguard® Sheathing Horizontally Applied

<table>
<thead>
<tr>
<th>Stud Spacing, In. O.C. (mm)</th>
<th>Screws, In. O.C. (mm)</th>
<th>Ultimate Load, PSF* (kPa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 (406)</td>
<td>8 (203)</td>
<td>127 (6.08)</td>
</tr>
<tr>
<td>16 (406)</td>
<td>6 (152)</td>
<td>142 (6.80)</td>
</tr>
<tr>
<td>16 (406)</td>
<td>4 (102)</td>
<td>192 (9.19)</td>
</tr>
<tr>
<td>12 (305)</td>
<td>8 (203)</td>
<td>157 (7.51)</td>
</tr>
<tr>
<td>12 (305)</td>
<td>6 (152)</td>
<td>204 (9.77)</td>
</tr>
<tr>
<td>12 (305)</td>
<td>4 (102)</td>
<td>270 (12.93)</td>
</tr>
<tr>
<td>8 (203)</td>
<td>8 (203)</td>
<td>208 (9.61)</td>
</tr>
<tr>
<td>8 (203)</td>
<td>6 (152)</td>
<td>354 (16.95)</td>
</tr>
<tr>
<td>8 (203)</td>
<td>4 (102)</td>
<td>410 (19.63)</td>
</tr>
</tbody>
</table>

NOTE: Apply DensGlass Sheathing to appropriately engineered framing system. Tested applied to 6” (152 mm) x 1-5/8” (41 mm) 18-gauge (43 mils) steel studs using #6 1-1/4” (32 mm) bugle head screws. Other stud sizes may be suitable.

Source: Tested in accordance with ASTM E 330 by Hurricane Test Laboratory. For a copy of report #G488-1001-07, contact Georgia-Pacific Gypsum Technical Hotline at 1-800-225-6119.

For racking strength resistance apply panel edges parallel with framing spaced a maximum of 16” (406 mm) o.c. for both 1/2” (12.7 mm) and 5/8” (15.9 mm) DensGlass Sheathing.

1/2” (12.7 mm) and 5/8” (15.9 mm) DensGlass Fireguard Sheathing Vertically or Horizontally Applied

<table>
<thead>
<tr>
<th>Thickness</th>
<th>Board Orientation</th>
<th>Stud Spacing, In. O.C. (mm)</th>
<th>Ultimate Load, PSF (kPa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2” (12.7)</td>
<td>Vertical</td>
<td>16 (406)</td>
<td>65 (3.11)</td>
</tr>
<tr>
<td>1/2” (12.7)</td>
<td>Horizontal</td>
<td>16 (406)</td>
<td>70 (3.35)</td>
</tr>
<tr>
<td>5/8” (15.9)</td>
<td>Vertical</td>
<td>24 (610)</td>
<td>68 (3.26)</td>
</tr>
<tr>
<td>5/8” (15.9)</td>
<td>Horizontal</td>
<td>24 (610)</td>
<td>85 (4.07)</td>
</tr>
<tr>
<td>5/8” (15.9)</td>
<td>Vertical</td>
<td>16 (406)</td>
<td>92 (4.40)</td>
</tr>
</tbody>
</table>

Source: TPI Report #69-047; wind load per ASTM E330 (bugle head screws 8” (203 mm) o.c.)
Soffit Applications, Fastening, Framing and Finishing

Method #1
Painted Ceilings and Soffits
Finished Joints

Method #2
Exterior Ceilings and Soffits

### Thickness | Framing Spacing | Orientation | Screw Spacing
--- | --- | --- | ---
1/2” (12.7 mm) | 16” (406 mm) o.c. max | Parallel or Perpendicular | 8” (203 mm) o.c. along framing
1/2” (12.7 mm) | 24” (610 mm) o.c. max | Perpendicular 24” o.c. framing | 8” (203 mm) o.c. along framing
5/8” (15.9 mm) | 24” (610 mm) o.c. max | Parallel or Perpendicular | 8” (203 mm) o.c. along framing

Method #1
Embed 2” (51 mm) wide fiberglass mesh tape in ToughRock® 90 Setting Type joint compound, or equivalent, over all joints. Once dry, apply a skim coat of ToughRock 90 setting compound, or equivalent, over the panels to achieve a uniform, smooth finish over the entire area. Prime with exterior-grade primer and finish with two coats of exterior-grade paint.

Method #2
Apply a synthetic-type Direct Applied Finish System in accordance with the coating manufacturer’s recommendation.

Special Conditions:
1. Control joints are recommended a maximum of 30 feet (9144 mm) or closer as specified by the design authority.
2. The roof must be dried in or protection from the elements must be provided prior to installing DensGlass Sheathing in horizontal applications to prevent moisture from ponding or settling on top of the sheathing panel or within the finished soffit.
3. Sandable setting compounds are not acceptable for use over DensGlass Sheathing in exterior soffit applications.
4. Georgia-Pacific Gypsum’s ToughRock 90 setting compound is not available in all markets. It is permissible to use setting-type joint compounds from other manufacturers that are equivalent to ToughRock 90 setting compound.
Soffit Board Comparison

<table>
<thead>
<tr>
<th>Product Comparison</th>
<th>1/2” (12.7 mm) DensGlass®</th>
<th>1/2” (12.7 mm) Gypsum Soffit Board (Paper-faced)</th>
<th>5/8” (15.9 mm) DensGlass Sheathing</th>
<th>5/8” (15.9 mm) Gypsum Soffit Board (Paper-faced)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humidified Deflection (Sag)</td>
<td>2/8” (6 mm)</td>
<td>7/8” (22 mm)</td>
<td>1/8” (3 mm)</td>
<td>4/8” (13 mm)</td>
</tr>
<tr>
<td>Water Absorption</td>
<td>&lt;10%</td>
<td>40%</td>
<td>&lt;10%</td>
<td>40%</td>
</tr>
<tr>
<td>Surface Water Absorption</td>
<td>.83 grams</td>
<td>2.5 grams</td>
<td>.83 grams</td>
<td>2.5 grams</td>
</tr>
<tr>
<td>Surface</td>
<td>Fiberglass mat</td>
<td>Paper-faced</td>
<td>Fiberglass mat</td>
<td>Paper-faced</td>
</tr>
</tbody>
</table>

1. Specified values for DensGlass Sheathing are found in ASTM C 1177, ASTM C 1396 and ASTM C 931 for gypsum soffit board, tested in accordance with ASTM C 473.

Air- and Water-Resistive Barriers

The need for moisture control, greater energy savings, comfort and improved environment is driving the use of air- and water-resistive barriers. Manufacturers, building codes and standards organizations are improving the ways moisture is controlled in buildings. DensGlass® Sheathing has been widely accepted for years as the preferred substrate with these systems and provides superior performance over other sheathings. The ultimate in wall performance and peace of mind is starting with the best substrate – DensGlass Sheathing.

DensGlass Sheathing is a superior substrate for a wide variety of air and water-resistive systems which include:

- #15 asphalt felt, ASTM D 226, type 1 or equivalent
- Synthetic wraps such as Tyvek®, Typar® MetroWrap®, ASTM E 1677 or equivalent
- Liquid- or fluid-applied air or vapor barriers such as Tremco ExoAir®, Grace Perm-A-Barrier®, VP, Henry Air-Bloc™ 32 or Carlisle Barriseal®
- Water barrier systems such as Sto Guard® as manufactured by Sto Corp., Dryvit’s Backstop® NT, Prosoco R-GUARD™ or equivalent
- Asphalt-based coatings
- Self-adhering membranes such as Carlisle CCW, Grace Perm-A-Barrier®, Henry Air-Bloc Vapor Barriers, Protecto Wrap
- Water-resistive barrier and drainage membranes such as DELTA-DRY®

Follow manufacturer’s installation recommendations for use with DensGlass panels, local building code requirements and design authority’s specifications.

Note: It is not required to provide a water-resistive barrier over DensGlass Sheathing for the protection of the gypsum sheathing itself during the 12-month weather exposure limited warranty. Consult with local building code, design professional, owner or cladding manufacturer for water-resistive barrier requirements and compatibility with the wall cladding.

Protection of Penetrations

All penetrations should be protected to prevent air and water infiltration. Follow building code, door/window manufacturer, or design authority’s recommendations for flashing around openings, abutments to dissimilar materials and wall terminations.

In areas that do not prescribe to current code requirements but still require long-term joint protection, either of the following two methods may be specified in lieu of an air- and water-resistive barrier system: 

**Method 1** Apply minimum 3/8” (9 mm) bead of sealant to joints and trowel to provide a layer approximately 2” (51 mm) wide by 1/16” (2 mm) thick spanning the joint. Use backer rod for openings larger than 1/8” (3 mm). 

**Method 2** Apply glass mesh joint tape to all joints, overlapping at intersections by the width of the tape. Apply approximately 3/8” (9 mm) bead of caulk along the joint. Embed the caulk into the entire surface of the tape with a trowel. Use backer rod for openings larger than 1/8” (3 mm). Follow manufacturer’s installation recommendations for use with DensGlass Sheathing, and design authority specifications.

A variety of caulk and polymer-based “fill” materials may be specified, including GE, Dow Corning, Tremco, Sto, Dryvit, BASF and Proseco. Please contact the caulk manufacturer for its recommended caulks over DensGlass Sheathing.
Fire-Rated Assemblies (Wood-Framed) continued

Design assemblies for illustrative purposes only. Consult appropriate fire resistance directory for assembly information. See Fire Safety Caution on back panel.

### 1-Hour Fire Rating

**Test Reference:** UL U305, U337, WHI 495-0702, ULC W301, GA WP 5515  
**Wall Thickness:** 4-7/8" (124 mm)  
**Weight per Sq. Ft.:** 7.5 (37 kg/m²)  
**Exterior:** 5/8" (15.9 mm) DensGlass® Fireguard® Sheathing applied parallel (U337, W301, U305) or at right angles (U305) to 2 x 4 wood studs 16” (406 mm) o.c. with 1-3/4” (45 mm) galvanized roofing nails 7” (178 mm) o.c. for all framing members. Exterior surface covered with weather exposed cladding or finish system.  
**Interior:** 5/8” (15.9 mm) DensArmor Plus® Fireguard® interior panels or 5/8” (15.9 mm) ToughRock® Fireguard® gypsum board applied parallel or at right angles to studs with 1-7/8” (48 mm) 6d coated nails 7” (178 mm) o.c. Stagger joints each side. **(Load-bearing)**

### 1-Hour Fire Rating

**Test Reference:** UL U309, cUL U309  
**Wall Thickness:** 4-7/8" (124 mm)  
**Weight per Sq. Ft.:** 7.5 (37 kg/m²)  
**Exterior:** 5/8” (15.9 mm) DensGlass Fireguard Sheathing applied parallel or at right angles to 2 x 4 wood studs spaced 24” (610 mm) o.c. with 1-7/8” (48 mm) galvanized roofing nails 7” (178 mm) o.c.  
**Interior:** 5/8” (15.9 mm) DensArmor Plus Fireguard or 5/8” (15.9 mm) ToughRock Fireguard gypsum board to framing with 1-7/8” (48 mm) 6d coated nails 7” (178 mm) o.c. **(Load-bearing)**

### 2-Hour Fire Rating

**Test Reference:** UL U301, cUL U301  
**Wall Thickness:** 6-1/8” (156 mm)  
**Weight per Sq. Ft.:** 12.5 (61 kg/m²)  
**Exterior:** Two layers 5/8” (15.9 mm) DensGlass Fireguard Sheathing applied parallel or at right angles to 2 x 4 wood studs 16” (406 mm) o.c. Base layer attached with 1-7/8” (48 mm) galvanized roofing nails 16” (406 mm) o.c. Face layer attached with 2-3/8” (60 mm) galvanized roofing nails 8” (203 mm) o.c. Stagger joints between layers and on base layer of both sides.  
**Interior:** Two layers 5/8” (15.9 mm) DensArmor Plus Fireguard or 5/8” (15.9 mm) ToughRock Fireguard gypsum board applied horizontally or vertically to framing. Base layer attached with 1-7/8” (48 mm) 6d cement coated nails 6” (152 mm) o.c. Face layer attached with 2-3/8” (60 mm) 6d cement coated nails 8” (203 mm) o.c. Stagger joints between layers and on base layer of both sides. **(Load-bearing)**

### 2-Hour Fire Rating

**Test Reference:** UL U302, cUL U302, GA WP 8410  
**Wall Thickness:** 10-1/8” (257 mm)  
**Exterior:** One layer 1/2” (12.7 mm) DensGlass Sheathing applied parallel or at right angles to studs with 1-3/4” (45 mm) galvanized roofing nails 6” (152 mm) o.c. Face layer is 2” x 4” x 8” (51 mm x 102 mm x 203 mm) clay brick with 1” (25 mm) air space between brick and exterior sheathing. 20-gauge (30 mils) galvanized wire ties attached to each stud with 8d coated nails as described above, located at every sixth course of bricks. **(Load-bearing)**  
**Interior:** Two layers 5/8” (15.9 mm) DensArmor Plus Fireguard or 5/8” (15.9 mm) ToughRock Fireguard gypsum board applied parallel or at right angles to 2 x 4 wood studs 16” (406 mm) o.c. Base layer attached with 1-7/8” (48 mm) 6d coated nails 8” (203 mm) o.c. Face layer attached with 2-3/8” (60 mm) coated nails 8” (203 mm) o.c.

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1Load restricted for Canadian applications—see UL Guide BXUV7.
2-Hour Fire Rating

Exterior: Base layer 5/8” (15.9 mm) DensGlass® Fireguard® Sheathing retardant treated 2 x 6 wood studs 16” (406 mm) o.c. with 6d coated nails, 1-7/8” (48 mm) long, 0.0915” (2 mm) shank, 1/4” (6 mm) heads, 12” (305 mm) o.c. and covered with a single layer fire resistant protective weather retarder paper stapled along each edge at 16” (406 mm) o.c. Galvanized self-furring wire mesh applied over sheathing with 8d galvanized roofing nails, 2-3/8” (60 mm) long, 0.113” (3 mm) shank, 9/32” (7 mm) heads, 6” (152 mm) o.c. Cement-stucco applied over wire mesh in two 1/2” (12.7 mm) thick coats with bonding agent applied between coats.

Interior: Base layer 5/8” (15.9 mm) DensArmor Plus® Fireguard® or 5/8” (15.9 mm) ToughRock® Fireguard® applied parallel to studs with 6d coated nails, 1-7/8” (48 mm) long, 0.0915” (2 mm) shank, 1/4” (6 mm) heads, 12” (305 mm) o.c. Face layer 5/8” (15.9 mm) DensArmor Plus Fireguard or 5/8” (15.9 mm) ToughRock Fireguard applied at right angles to studs with 8d coated nails, 2-3/8” (60 mm) long, 0.113” (3 mm) shank, 9/32” (7 mm) heads, 8” (203 mm) o.c. at edges and 12” (305 mm) o.c. at intermediate studs. (Load-bearing)

1-Hour Fire Rating

Exterior: Base layer 5/8” (15.9 mm) DensGlass® Fireguard® Sheathing applied vertically to min. 3-5/8” (92 mm) corrosion resistant 25-gauge (18 mils) steel studs 24” (610 mm) o.c. with 1” (25 mm) corrosion resistant bugle head screws 8” (203 mm) o.c. at board edges and 8” (203 mm) at intermediate studs.

Interior: 5/8” (15.9 mm) DensArmor Plus Fireguard or 5/8” (15.9 mm) ToughRock Fireguard gypsum board applied vertically to framing with 1” (25 mm) Type S bugle head screws 8” (203 mm) o.c. at board edges and 12” (305 mm) at intermediate studs.

1Load restricted for Canadian applications—see UL Guide BXUV7.
DensGlass® Sheathing

Fire-Rated Assemblies (Steel-Framed) continued

1-Hour Fire Rating

Test Reference: SWR1 01-4409-003, GA WP 8122
Partition Thickness: 6” – 7” (152 – 178 mm) Varies based on insulation thickness
Weight per Sq. Ft.: 7.0 (34 kg/m²)
Exterior: 5/8” (15.9 mm) DensGlass® Fireguard® Sheathing applied parallel to 3-5/8” (92 mm) 18-gauge (43 mils) steel studs 16” (406 mm) o.c. with #6 x 1-1/4” (32 mm) self-drilling, corrosion-resistant, bugle head, drywall screws 8” (203 mm) o.c. at edges and ends and 8” (203 mm) o.c. at intermediate studs. Proprietary polymer modified exterior insulation and finish system applied over sheathing. 2” (51 mm) maximum foam-plastic thickness.
Interior: 5/8” (15.9 mm) ToughRock® Fireguard® or 5/8” (15.9 mm) DensArmor Plus® Fireguard® gypsum board applied parallel to studs with #6 x 1-1/4” (32 mm) self-drilling, bugle head drywall screws 8” (203 mm) o.c. at edges and ends and 12” (305 mm) o.c. at intermediate studs.

1-Hour Fire Rating

Test Reference: SWR1 01-4409-001, GA WP 8123
Partition Thickness: 6” – 9” (152 – 229 mm) Varies based on insulation thickness
Weight per Sq. Ft.: 7.0 (34 kg/m²)
Exterior: 5/8” (15.9 mm) DensGlass® Sheathing applied parallel to 3-5/8” (92 mm) 18-gauge (43 mils) steel studs 24” (610 mm) o.c. with #6 x 1-1/4” (32 mm) self-drilling, corrosion-resistant, bugle head, drywall screws 8” (203 mm) o.c. at edges and ends and 8” (203 mm) o.c. at intermediate studs. Polymer-based exterior insulation and finish system applied over sheathing. 4” (102 mm) maximum foam-on-plastic thickness.
Interior: One layer 5/8” (15.9 mm) ToughRock Fireguard or 5/8” (15.9 mm) DensArmor Plus® Fireguard® gypsum board applied parallel to studs with #6 x 1-1/4” (32 mm) self-drilling, bugle head drywall screws 8” (203 mm) o.c. at edges and ends and 12” (305 mm) o.c. at intermediate studs.

2-Hour Fire Rating

Test Reference: UL U425, cUL U425
Wall Thickness: 6” (152 mm)
Weight per Sq. Ft.: 11.0 psf (54 kg/m²)
Exterior: Two layers 5/8” (15.9 mm) DensGlass Fireguard Sheathing applied vertically to min. 3-1/2” (89 mm) corrosion resistant 20-gauge (30 mils) steel studs 24” (610 mm) o.c. Base layer attached with 1” (25 mm) Type S-12 corrosion resistant bugle head screws 8” (203 mm) o.c. Face layer attached with 1-5/8” (41 mm) Type S-12 corrosion resistant bugle head screws spaced 8” (203 mm) o.c. Joints staggered.
Interior: Two layers 5/8” (15.9 mm) DensArmor Plus Fireguard or 5/8” (15.9 mm) ToughRock Fireguard gypsum board applied vertically to framing. Base layer attached with 1” (25 mm) Type S-12 bugle head screws 12” (305 mm) o.c. Face layer attached with 1-5/8” (41 mm) Type S-12 bugle head screws spaced 12” (305 mm) o.c. Joints staggered. Insulation to completely fill stud cavity. (Load-bearing: 80% of design load)

2-Hour Fire Rating

Test Reference: UL U411, cUL U411
Wall Thickness: 5” (127 mm)
Weight per Sq. Ft.: 11.0 (54 kg/m²)
Exterior: Two layers 5/8” (15.9 mm) DensGlass Fireguard Sheathing applied vertically to min. 2-1/2” (64 mm) corrosion resistant 25-gauge (18 mils) steel studs 24” (610 mm) o.c. Base layer attached with 1” (25 mm) Type S corrosion resistant bugle head screws 16” (406 mm) o.c. Face layer attached with 1-5/8” (41 mm) Type S corrosion resistant bugle head screws spaced 8” (203 mm) o.c. Joints staggered.
Interior: Two layers 5/8” (15.9 mm) DensArmor Plus Fireguard or 5/8” (15.9 mm) ToughRock Fireguard gypsum board applied vertically to framing. Base layer attached with 1” (25 mm) Type S bugle head screws 16” (406 mm) o.c. Face layer attached with 1-5/8” (41 mm) Type S bugle head screws spaced 16” (406 mm) o.c. in the field and along vertical edges and 12” (305 mm) o.c. to the floor and ceiling runners. Joints staggered. Batt or blanket insulation optional.

1Load restricted for Canadian applications—see UL Guide BXUV7.

CAUTION: For product fire, safety and use information, go to gp.com/safetyinfo.

For latest information and updates: Technical Service Hotline 1.800.225.6119 or www.gpgypsum.com
Architectural Specifications

Part 1 – General

1.0 Description

Work in this section includes, but is not limited to: wall, ceiling and soffit sheathing.

Related work specified elsewhere:
- Brick masonry
- Stone
- Cold-formed metal framing
- Rough carpentry
- Finish carpentry
- Exterior Insulation and Finish Systems (EIFS)
- Joint sealers
- Light-gauge metal framing
- Painting

1.1 Submittals

Product Data: Submit manufacturer’s descriptive literature indicating material composition, thickness, sizes and fire resistance.

1.2 Quality Assurance

Fire-resistance ratings: Where applicable, provide materials and construction that are identical to those of assemblies whose fire-resistance ratings are indicated.

1.3 Delivery, Storage and Handling

Delivery: Deliver materials to the job site in manufacturer’s original packaging, containers and bundles with manufacturer’s brand name and identification intact and legible. Product also may be wrapped in temporary factory-applied plastic packaging (plastic wrap) that must be removed upon receipt. Reference GA801 for storage information. Failure to remove the plastic shipping covers and plastic wrap may result in entrapment of condensation or moisture, which may cause application problems.

Storage and handling: Store flat on a level surface and handle materials to protect against contact with damp and wet surfaces, exposure to weather, breakage and damage to edges. Provide air circulation under covering and around stacks of materials.

Part 2 – Products

2.0 Sheathing Board

Acceptable Products: 1/2” (12.7 mm) DensGlass® Sheathing; 5/8” (15.9 mm) DensGlass® Fireguard® Sheathing

Size: DensGlass Sheathing: 1/2” (12.7 mm) thick by 4’ (1219 mm) by 8’ (2438 mm), 9’ (2743 mm) or 10’ (3048 mm) (1.9 lb. per square foot) (9.3 kg/m²); DensGlass Fireguard Sheathing: 5/8” (15.9 mm) thick x 4’ (1219 mm) x 8’ (2438 mm), 9’ (2743 mm) or 10’ (3048 mm) (2.5 lb. per square foot) (12 kg/m²).

Composition: Gypsum sheathing manufactured in accordance with ASTM C 1177 with fiberglass mats both sides and long edges, water-resistant treated core.

Fire resistance: Noncombustible as described and tested in accordance with ASTM E 136 and CAN/ULC-S114.

1/2” or 5/8” (12.7 mm or 15.9 mm) DensGlass Sheathing: Flame spread 10, when tested in accordance with ASTM E 84 and CAN/ULC S-102. 5/8” (15.9 mm) DensGlass Fireguard Sheathing is rated Type X as defined in ASTM C 1177 and can be used as a replacement to any other generic assembly utilizing a 5/8” (15.9 mm) Type X gypsum board (see GA-600 for numeric assemblies).


2.1 Air- and Water-Resistant Barrier

If required by local building code, #15, nonperforated, asphalt saturated felt complying with ASTM D 226, Type 1, synthetic building wraps complying with ASTM E 1677, or other water-resistive barrier system meeting local building code requirements.
2.2 Accessories
Joint tape: 2” (51 mm) wide fiberglass mesh tape, see 3.2.A.
Joint compound: ToughRock® setting-type joint compound, see 3.2.A.
Nails, wood framing: 11-gauge galvanized roofing nails, 1-1/2” (38 mm) min. length for 1/2” (12.7 mm) DensGlass® Sheathing and 1-3/4” (45 mm) length for 5/8” (15.9 mm) DensGlass® Fireguard® Sheathing.
Screws, metal framing: Bugle or wafer head, self-tapping, rust-resistant, fine thread for heavy-steel gauge. Bugle or wafer head, rust-resistant sharp point, fine thread for light-gauge metal framing or furring.
Screws, wood framing: Rust-resistant, bugle or wafer head, coarse thread, 1-1/4” (32 mm) length sharp point for wood.

Part 3 – Execution

3.0 Preparation
Examine subframing; verify that surface of framing and furring members to receive sheathing does not vary more than 1/8” (3 mm) from the placement of faces of adjacent members.

3.1 Sheathing
Provide DensGlass Sheathing where indicated on drawings. Install sheathing in accordance with manufacturer’s instructions and applicable instructions in GA-253 and ASTM C 1280.
Install DensGlass Sheathing with GOLD side out.
Use maximum lengths possible to minimize number of joints.
Attach DensGlass Sheathing to wood framing with nails spaced 4” (102 mm) o.c. at perimeter for racking shear resistance; 8” (203 mm) o.c. at perimeter where there are framing supports and where racking shear resistance is not required; and 8” (203 mm) o.c. along intermediate framing in field for both conditions. Unless specified otherwise, attach DensGlass Sheathing to metal framing with screws spaced 8” (203 mm) o.c. at perimeter where there are framing supports; and 8” (203 mm) o.c. along intermediate framing in field. A greater number of fasteners may be specified to obtain specific values.
Drive fasteners to bear tight against and flush with surface of sheathing. Do not countersink. Locate fasteners minimum 3/8” (10 mm) from edges and ends of sheathing panels, tight against and flush with surface of sheathing.
Water-Resistive Barrier: If a water-resistive barrier is required by the local building code, design professional, owner or cladding manufacturer over DensGlass Sheathing, one of the following procedures may be used. Consult building code or design authority for proper application selection. Follow manufacturer’s installation recommendations.
A. Entire exterior face of gypsum sheathing covered with an asphalt impregnated felt or synthetic fiber wrap such as Tyvek® Commercial Wrap, or equal.
B. Liquid applied barriers such as Sto Guard® as manufactured by Sto Corp., Dryvit’s Backstop® NT, Prosoco R-GUARD™, or equal.
C. Self adhering membranes.

3.2 Painted Ceilings and Soffits
Soffits must be dried in and protected from the elements during and after installation.
A. Apply fiberglass mesh joint tape over joints and embed in setting-type joint compound specified. Skim coat surface with setting-type joint compound for smooth finish. Prime and paint with exterior grade, high quality paint.
B. Apply EIFS with or without insulation; install as recommended by manufacturer.
Limitations

DensGlass® Sheathing is resistant to normal weather conditions, but it is not intended for immersion in water. Cascading roof/floor water should be directed away from the sheathing until appropriate drainage is installed.

Avoid any condition that will create moisture in the air and condensation on the exterior walls during periods when the exterior temperature is lower than the interior. The use of forced air heaters creates volumes of water vapor which, when not properly vented, can condense on building materials. The use of these heaters and any resulting damage is not the responsibility of Georgia-Pacific Gypsum. Consult heater manufacturer for proper use and ventilation. Vapor barrier may also restrict ventilation.

When DensGlass Sheathing panels are used in slanted wall applications, that portion of the wall must be temporarily protected from the elements by the use of a water-resistant barrier prior to application of the cladding. Do not allow water to pond or settle on sheathing. Also, exposed wall ends such as those that may be found in parapets must be covered to prevent water from infiltrating the cavity.

Georgia-Pacific Gypsum does not warrant and is not responsible or liable for the performance of the cladding or exterior systems applied over DensGlass Sheathing. The suitability and compatibility of any system is the responsibility of the system manufacturer or design authority.

Do not laminate DensGlass Sheathing to masonry surfaces; use furring strips or framing.

DensGlass Sheathing is not intended for roof applications. For roof applications, consult our DensDeck® Roof Board brochure.

DensGlass Sheathing is not intended for interior or exterior tile applications. For interior tile applications, consult our DensShield® Tile Backer brochure.

DensGlass Sheathing should not be used in lieu of plywood where required.

Do not apply DensGlass Sheathing below grade.

For all installations, design details such as fasteners, sealants and control joints per system specifications must be properly installed. Openings and penetrations must be properly flashed and sealed. Failure to do so will void the warranty.

Do not use DensGlass Sheathing as a base for nailing or mechanical fastening. Fasteners should be flush to the face of the board, not countersunk.

### COMMONLY USED METRIC CONVERSIONS

<table>
<thead>
<tr>
<th>Gypsum Board Thickness</th>
<th>Framing Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4 in. – 6 mm</td>
<td>16 in. – 406 mm</td>
</tr>
<tr>
<td>1/2 in. – 12.7 mm</td>
<td>24 in. – 610 mm</td>
</tr>
<tr>
<td>5/8 in. – 15.9 mm</td>
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</tr>
<tr>
<td>1 in. – 25.4 mm</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Gypsum Board Width</th>
<th>Fastener Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 ft. – 610 mm</td>
<td>2 in. – 51 mm</td>
</tr>
<tr>
<td>4 ft. – 1219 mm</td>
<td>2.5 in. – 64 mm</td>
</tr>
<tr>
<td>32 in. – 813 mm</td>
<td>7 in. – 178 mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gypsum Board Length</th>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 ft. – 1219 mm</td>
<td>40°F – 5°C</td>
</tr>
<tr>
<td>5 ft. – 1524 mm</td>
<td>50°F – 10°C</td>
</tr>
<tr>
<td>8 ft. – 2438 mm</td>
<td>125°F – 52°C</td>
</tr>
<tr>
<td>9 ft. – 2743 mm</td>
<td></td>
</tr>
<tr>
<td>10 ft. – 3048 mm</td>
<td></td>
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<tr>
<td>12 ft. – 3658 mm</td>
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</tbody>
</table>
## The Dens™ Brand of High-Performance Gypsum Products from Georgia-Pacific

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DensGlass® Sheathing</strong></td>
<td>The original and universal standard of exterior gypsum sheathing offers superior weather resistance, with a 12-month weather exposure limited warranty. Look for the familiar GOLD color.</td>
</tr>
<tr>
<td><strong>DensShield® Tile Backer</strong></td>
<td>Acrylic-coated tile backer stops moisture at the surface. Lightweight and strong, built for speed on the job site. IBC/IRC Code Compliant. GREENGUARD listed for microbial resistance.</td>
</tr>
<tr>
<td><strong>DensDeck® Roof Boards</strong></td>
<td>Fiberglass mat roof board used as the ideal thermal barrier and cover board to improve resistance to wind uplift, hail, foot traffic, fire, moisture and mold in a broad range of commercial roofing applications. Look for green DensDeck Prime and DensDeck DuraGuard, too.</td>
</tr>
<tr>
<td><strong>DensGlass® Shaftliner</strong></td>
<td>Specially-designed panels for moisture-prone vertical or horizontal shafts, interior stairwells and area separation wall assemblies. 12-month weather exposure limited warranty. GREENGUARD listed for microbial resistance.</td>
</tr>
<tr>
<td><strong>DensArmor Plus® High-Performance Interior Panel</strong></td>
<td>High-performance interior panel accelerates scheduling because it can be installed before the building is dried-in. 12-month weather exposure limited warranty. GREENGUARD Indoor Air Quality Certified®, GREENGUARD Children &amp; SchoolsSM Certified and CHPS™ listed for low emissions. GREENGUARD listed for microbial resistance.</td>
</tr>
<tr>
<td><strong>DensArmor Plus® Abuse-Resistant Interior Panel</strong></td>
<td>Same benefits as DensArmor Plus® High-Performance Interior Panel with added resistance to scuffs, abrasions and surface indentations. Ideal for healthcare facilities and schools. GREENGUARD Indoor Air Quality Certified®, GREENGUARD Children &amp; SchoolsSM Certified and CHPS™ listed for low emissions. GREENGUARD listed for microbial resistance.</td>
</tr>
<tr>
<td><strong>DensArmor Plus® Impact-Resistant Interior Panel</strong></td>
<td>Even greater durability with an embedded impact-resistant mesh for the ultimate resistance in high traffic areas. Ideal for healthcare facilities, schools and correctional institutions. GREENGUARD Indoor Air Quality Certified®, GREENGUARD Children &amp; SchoolsSM Certified and CHPS™ listed for low emissions. GREENGUARD listed for microbial resistance.</td>
</tr>
</tbody>
</table>

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**WARRANTIES, REMEDIES AND TERMS OF SALE** – For current warranty information for this product, please go to [www.gpgypsum.com](http://www.gpgypsum.com) and select the product for warranty information. All sales of this product by Georgia-Pacific are subject to our Terms of Sale available at [www.gpgypsum.com](http://www.gpgypsum.com).

**UPDATES AND CURRENT INFORMATION** – The information in this document may change without notice. Visit our website at [www.gpgypsum.com](http://www.gpgypsum.com) for updates and current information.

**CAUTION**: For product fire, safety and use information, go to [gp.com/safetyinfo](http://gp.com/safetyinfo) or call 1-800-225-6119.

**HANDLING AND USE – CAUTION**: This product contains fiberglass facings which may cause skin irritation. Dust and fibers produced during the handling and installation of the product may cause skin, eye and respiratory tract irritation. Avoid breathing dust and minimize contact with skin and eyes. Wear long sleeve shirts, long pants and eye protection. Always maintain adequate ventilation. Use a dust mask or NIOSH/MSHA approved respirator as appropriate in dusty or poorly ventilated areas.

**FIRE SAFETY CAUTION** – Passing a fire test in a controlled laboratory setting and/or certifying or labeling a product as having a one-hour, two-hour, or any other fire resistance or protection rating and, therefore, as acceptable for use in certain fire rated assemblies/systems, does not mean that either a particular assembly/system incorporating the product, or any given piece of the product itself, will necessarily provide one-hour fire resistance, two-hour fire resistance, or any other specified fire resistance or protection in an actual fire. In the event of an actual fire, you should immediately take any and all actions necessary for your safety and the safety of others without regard for any fire rating of any product or assembly/system.